I claim:

1.   A method for calculation of filtered channel estimation values in radio systems,
      comprising the following steps:
      -   determining a sequence of unfiltered channel estimation values;
      -   selecting a specific set of filter coefficients from two or more filter
          coefficient sets, with the filter coefficients being calculated on the basis of
          the MMSE optimality criterion for a predetermined recursive digital filter;
      -   filtering of the sequence of unfiltered channel estimation values by means of
          the recursive digital filter using the selected filter coefficients in order to
          calculate the filtered channel estimation values.

2.   The method according to Claim 1, wherein the specific set of filter coefficients
      is selected as a function of the relative speed between the transmitter and the
      receiver and of the signal-to-interference and noise ratio.

3.   The method according to Claim 1, wherein sets   of   filter   coefficients   are
      calculated for different relative speeds between the transmitter and the receiver
      and for any desired signal-to-interference and noise ratio, and wherein the
      selection and filter steps comprises the steps of:
      -   selecting a specific set of filter coefficients as a function of the relative
          speed between the transmitter and the receiver;
      -   filtering of sequences of unfiltered channel estimation values which are
          associated with different transmission paths, using the filter coefficients of
          the same selected specific set.

4.   The method according to Claim 3, wherein the filter coefficients of said sets
      are calculated by averaging over various values of the signal-to-interference
      and noise ratio in the MMSE optimization process.

5.   An apparatus for calculation of filtered channel estimation values in radio systems, comprising:

-   means for determination of a sequence of unfiltered channel estimation values,

-   means for selection of a specific set of filter coefficients from two or more filter coefficient sets, with the filter coefficients being calculated on the basis of the MMSE optimality criterion for a predetermined recursive digital filter, wherein the predetermined recursive digital filter for filtering of the sequence of unfiltered channel estimation values uses the selected filter coefficients in order to calculate the filtered channel estimation values.

6.   The apparatus according to Claim 5, wherein the means for selection of the specific set of filter coefficients is designed to carry out the selection process as a function of the relative speed between the transmitter and the receiver and of the signal-to-interference and noise ratio.

7.   The apparatus according to Claim 5, further comprising:

-   two or more sets of filter coefficients, with each set being calculated for a specific relative speed between the transmitter and the receiver and for any given signal-to-interference and noise ratio, and wherein

-   the means for selection of a specific set of filter coefficients is designed to make the selection as a function of the relative speed between the transmitter and the receiver,

-   two or more digital filters are provided for filtering sequences of unfiltered channel estimation values which are each associated with different transmission paths, and

-   the filters are configured using the same filter coefficients from the selected set.

8.   The apparatus according to Claim 7, wherein the filter coefficients of said sets are calculated by averaging over different values of the signal-to-interference and noise ratio during the MMSE optimization.

9. A method for calculation of filtered channel estimation values in radio systems, comprising the following steps:
   - calculating filter coefficients on the basis of the MMSE optimality criterion for two or more filter coefficient sets for a predetermined recursive digital filter;
   - determining a sequence of unfiltered channel estimation values;
   - selecting a specific set of filter coefficients from said filter coefficient sets;
   - filtering the sequence of unfiltered channel estimation values by means of the recursive digital filter.

10. The method according to Claim 9, wherein the specific set of filter coefficients is selected as a function of the relative speed between the transmitter and the receiver and of the signal-to-interference and noise ratio.

11. The method according to Claim 9, wherein sets of filter coefficients are calculated for different relative speeds between the transmitter and the receiver and for any desired signal-to-interference and noise ratio, and wherein the selection and filter steps comprises the steps of:
   - selecting a specific set of filter coefficients as a function of the relative speed between the transmitter and the receiver;
   - filtering of sequences of unfiltered channel estimation values which are associated with different transmission paths, using the filter coefficients of the same selected specific set.

12. The method according to Claim 11, wherein the filter coefficients of the sets are calculated by averaging over various values of the signal-to-interference and noise ratio in the MMSE optimization process.